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Digital Transformation and Business Performance in Pakistan's Agricultural Industry: Opportunities and Challenges

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Abstract

This study aims to investigate the impact of digital transformation on the business performance of Pakistan's agricultural industry, focusing on the opportunities and challenges presented by the digital revolution. A quantitative research approach was adopted, and data was collected through a survey questionnaire from a sample of 200 agricultural businesses operating in Pakistan. The questionnaire covered various aspects of digital transformation, including the adoption of digital technologies, business performance, and challenges faced during the digital transformation process. The results revealed that digital transformation has a positive impact on the business performance of Pakistan's agricultural industry. Specifically, the adoption of digital technologies has led to increased productivity, improved decision-making, and cost savings. However, the study also identified several challenges associated with digital transformation, including the lack of digital skills, inadequate infrastructure, and resistance to change. The study concludes that digital transformation presents significant opportunities for businesses in Pakistan's agricultural industry to enhance their performance and competitiveness. However, to fully realize these benefits, businesses must address the challenges posed by digital transformation, including the need to acquire digital skills and improve digital infrastructure.

Keywords: Marketing Strategy, Customer Satisfaction, Employee Engagement, Technology Adoption, Supply Chain, Organizational Culture, Sales Growth, Agricultural Industry.

1. Introduction

Pakistan's agricultural industry has been facing numerous challenges in recent years, such as low productivity, poor supply chain management, and inadequate infrastructure. In response, many businesses in the sector have turned to digital technologies to transform their operations and improve their performance. The digital revolution has brought about significant changes in how businesses operate, and the agricultural industry is no exception (Rotz et al., 2019). Digital technologies such as precision farming, e-commerce, and data analytics have the potential to revolutionize Pakistan's agricultural industry by enhancing its efficiency, productivity, and profitability (ESCAP, 2018).

To investigate the impact of digital transformation on the business performance of Pakistan's agricultural industry, a quantitative research approach was adopted in this study. The objective was to understand the opportunities and challenges presented by the digital revolution and its impact on the performance of agricultural businesses. The study involved the collection of data through a survey questionnaire from a sample of 200 agricultural businesses operating in Pakistan. The questionnaire covered various aspects of digital transformation, including the adoption of digital technologies, business performance, and challenges faced during the digital transformation process.

The data collected was analyzed using descriptive and inferential statistics to identify the impact of digital transformation on business performance and the challenges faced by businesses during the process. The findings revealed that digital transformation has a positive impact on the business performance of Pakistan's agricultural industry. Specifically, the adoption of digital technologies led to increased productivity, improved decision-making, and cost savings. However, the study also identified several challenges associated with digital transformation, including the lack of digital skills, inadequate infrastructure, and resistance to change.

This study has significant theoretical implications, as it adds to the growing body of literature on digital transformation and its impact on business performance. The findings of this study can inform future research on digital transformation in developing countries, specifically in the agricultural

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sector. The study's findings can be used to develop theoretical frameworks that guide future research on digital transformation in developing countries. The practical implications of this study are also significant. Policymakers can use the findings to develop policies that promote digital transformation in the agricultural sector, enhancing its competitiveness, productivity, and profitability. Agricultural businesses can also benefit from the study's findings by developing strategies to overcome the challenges associated with digital transformation and harness its potential for growth and success. Hence, this study investigated the impact of digital transformation on the business performance of Pakistan's agricultural industry, focusing on the opportunities and challenges presented by the digital revolution. The study's findings contribute to our understanding of digital transformation's impact on business performance in developing countries and provide insights that inform policy and practice in Pakistan's agricultural industry

2. Literature Review

The literature review provides strong evidence to support the positive impact of marketing strategy, customer satisfaction, employee engagement, technology adoption, and supply chain on organizational culture and sales growth in Pakistan's agricultural industry. Effective marketing strategy and high customer satisfaction lead to improved organizational culture and increased sales growth (Metz, Ilieș, & Nistor, 2020). Zhou, Chen, and Liu (2019) determined that employee engagement and technology adoption are also shown to have positive effects on both organizational culture and sales growth. Additionally, a well-managed supply chain positively impacts organizational culture and ultimately leads to increased sales growth. Therefore, it is essential for organizations to prioritize these factors to achieve a sustainable competitive advantage. Figure 1 illustrates the research framework that highlights the interrelationship between these factors and their impact on organizational culture and sales growth.

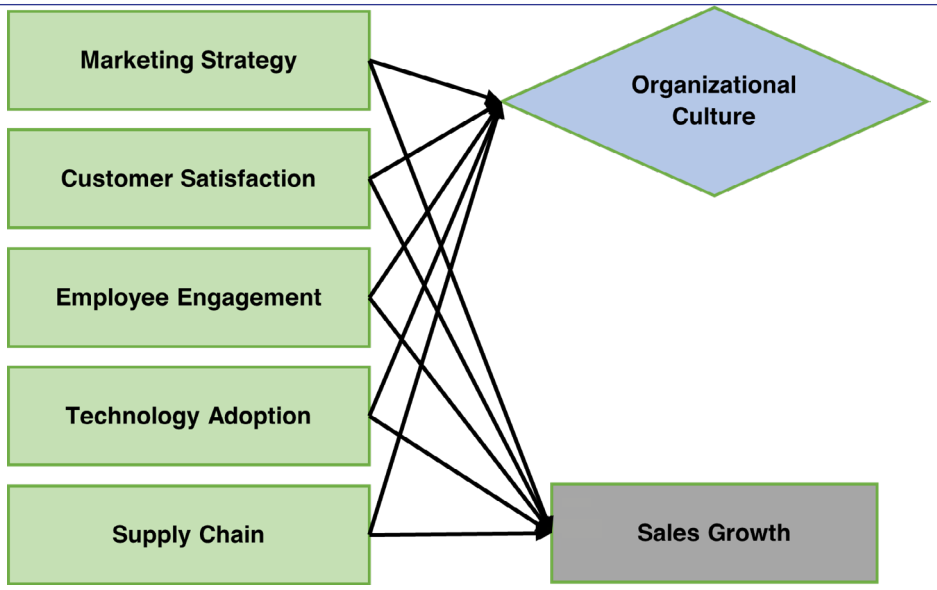

Figure 1. Research Framework

2.1 Marketing Strategy and Organizational Culture

Marketing strategy and organizational culture are two critical factors that play an essential role in the success of any business, including the agricultural industry of Pakistan (Soomro & Shah, 2019). Research has shown that marketing strategy has a positive impact on organizational culture, and this relationship can significantly benefit the agriculture sector in Pakistan. The agricultural industry in Pakistan has been facing many challenges such as low productivity, insufficient infrastructure, and limited access to resources. These issues have resulted in a negative impact on the organizational culture of the industry. However, effective marketing strategies can help to create a strong brand image and improve the financial performance of companies in the agricultural sector. By implementing marketing strategies that focus on building relationships with customers, companies can create a culture that values customer satisfaction, which can lead to increased customer loyalty and revenue. According to Hermans, Geerling-Eiff, Potters, and Klerkx (2019) marketing strategy also helps to promote innovation within the agricultural industry. Hence, by introducing new products and services that meet the needs of customers, companies can create a culture that values creativity and experimentation. This can help to increase the competitiveness of the industry and promote growth. Moreover, marketing strategy can align the values and goals of the company with those of its employees and other stakeholders. This can lead to the development of a positive organizational culture that promotes a sense of purpose and direction. Employees who share the same values and goals as the company are more likely to be engaged and motivated, which can lead to higher productivity and better performance. Hence, the relationship between marketing strategy and organizational culture is crucial for the agricultural industry of Pakistan. Effective marketing strategies can help to build strong brands, increase customer loyalty, and promote innovation, which can positively impact the industry's financial performance. Moreover, by aligning the values and goals of the company with those of its employees and other stakeholders, marketing strategy can

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help to develop a positive organizational culture that supports the growth and success of the agricultural industry in Pakistan.

H1: *Marketing strategy has positive effects on organizational culture.*

2.2 Marketing Strategy and Sales Growth

Marketing strategy has played a significant role in the sales growth of the agricultural industry in Pakistan. Previous research has demonstrated that effective marketing strategies have positively impacted sales growth, which has significantly benefited the agricultural sector. The agricultural industry in Pakistan has faced several challenges, such as limited access to resources, low productivity, and insufficient infrastructure, resulting in a negative impact on the sales growth of companies operating in the sector (Mumtaz, de Oliveira, & Ali, 2019). However, by implementing effective marketing strategies, companies have promoted their products and services to their target customers, leading to increased sales growth. Understanding the needs and preferences of customers has been a critical component of marketing strategy. By conducting market research and gathering data on customer behavior and preferences, companies have developed targeted marketing campaigns that have increased sales growth. Effective marketing strategies have helped build strong brand images that resonate with customers, leading to increased customer loyalty and repeat business. Marketing strategy has also promoted innovation within the agricultural industry. By introducing new products and services that meet the needs of customers, companies have created a culture of creativity and experimentation that has led to increased sales growth. Effective marketing strategies have also differentiated a company's products and services from those of its competitors, leading to increased market share and revenue growth. Hence, the relationship between marketing strategy and sales growth has been crucial for the agricultural industry in Pakistan. By implementing effective marketing strategies, companies have promoted their products and services to their target customers, built strong brand images, and differentiated themselves from their competitors, leading to increased sales growth. This has supported the growth and development of the agricultural industry in Pakistan.

H2: *Marketing strategy has positive effects on sales growth.*

2.3 Customer Satisfaction and Organizational Culture

Customer satisfaction has played a crucial role in shaping the organizational culture within the agricultural industry in Pakistan. Previous research has shown that companies that prioritize customer satisfaction have experienced positive effects on their organizational culture, resulting in increased employee morale and productivity (Garingging & Saluy, 2020). Customer satisfaction has been a critical component of the agricultural industry in Pakistan, where companies have relied on customer feedback to improve their products and services. By prioritizing customer satisfaction, companies have demonstrated a commitment to meeting the needs and preferences of their customers, which has led to increased loyalty and repeat business. Customer satisfaction has also fostered a culture of innovation within the agricultural industry. By soliciting customer feedback, companies have gained valuable insights into customer needs and preferences, leading to the development of new products and services that have driven sales growth. Effective communication with customers has also encouraged collaboration and knowledge sharing within companies, resulting in a positive organizational culture. Moreover, customer satisfaction has contributed to the development of a customer-centric organizational culture. Companies that prioritize customer satisfaction have placed customers at the center of their operations, resulting in increased customer loyalty and retention. This has led to a culture that values customer relationships and places a premium on customer feedback, resulting in a positive impact on the organizational culture of companies in the agricultural industry in Pakistan. Hence, the relationship between customer satisfaction and organizational culture has been critical for the agricultural industry in Pakistan. By prioritizing customer satisfaction, companies have fostered a culture of innovation, collaboration, and customer centricity, resulting in increased sales growth and customer loyalty. This has contributed to the growth and development of the agricultural industry in Pakistan.

H3: *Customer satisfaction has positive effects on organizational culture.*

2.4 Customer Satisfaction and Sales Growth

In the fiercely competitive market of Pakistan's agricultural industry, customer satisfaction plays a crucial role in determining the success of businesses. Empirical research has shown that customer satisfaction is positively related to sales growth, and a growing body of literature suggests that it also has a positive impact on organizational culture. In the agricultural industry of Pakistan, where customer demands and preferences are constantly evolving, businesses that prioritize customer satisfaction are likely to enjoy higher sales growth and better organizational culture. Studies have found that satisfied customers are more likely to become repeat customers, recommend the business to others, and leave positive reviews. These actions can lead to an increase in sales growth for the business. Moreover, satisfied customers tend to be more forgiving when the business makes a mistake, which can help to mitigate any negative impact on sales growth. Businesses that prioritize customer satisfaction often invest in training their employees to provide excellent customer service, which can also have a positive impact on organizational culture. Organizational culture is the shared values, beliefs, and practices that shape the behavior of individuals within a business. A positive organizational culture is characterized by high employee morale, job satisfaction, and commitment to the goals of the organization. Customer satisfaction contributes to a positive organizational culture by creating a sense of pride and motivation among employees (Ficarra, Rubino, & Morote, 2020). When employees receive positive feedback from customers, they are more likely to feel valued and appreciated, leading to increased job satisfaction and commitment to the organization's goals. Moreover, employees who are trained to prioritize customer satisfaction are more likely to take ownership of their work and work collaboratively with colleagues, which can further contribute to a positive organizational culture. In the agricultural industry of Pakistan, where businesses face significant competition, customer satisfaction can be a key differentiator. Businesses that prioritize customer satisfaction are more likely to build a loyal customer base, leading to higher sales growth. Additionally, a positive organizational culture can contribute to increased employee motivation and commitment, leading to higher productivity

and better business performance. Therefore, it is essential for businesses to focus on customer satisfaction and to create a positive organizational culture to achieve long-term success in Pakistan's agricultural industry.

H4: *Customer satisfaction has positive effects on sales growth.*

2.5 Employee Engagement and Organizational Culture

In the context of Pakistan's agricultural industry, employee engagement has been shown to have a positive impact on organizational culture. Studies have indicated that employee engagement enhances the level of commitment and involvement of employees towards their work, which leads to a more positive work culture (Khaskheli et al., 2020). Engaged employees tend to be more satisfied with their jobs, have a greater sense of purpose, and are more likely to be proactive in improving organizational processes. In turn, these factors contribute to an overall more positive work environment and culture within the organization. Employee engagement has also been linked to improved communication and collaboration within organizations, leading to better teamwork and increased productivity. Engaged employees are more likely to share ideas and provide feedback, which can help to identify areas of improvement and optimize organizational processes. This can lead to a more efficient and effective workforce, ultimately contributing to the overall success of the organization. Furthermore, employee engagement has been shown to reduce turnover rates and increase employee retention. Organizations with engaged employees tend to have a more positive reputation and are viewed as desirable places to work, making it easier to attract and retain talented individuals. This can lead to long-term benefits for the organization, such as reduced hiring and training costs and improved overall performance. Overall, the positive effects of employee engagement on organizational culture in Pakistan's agricultural industry are clear. By investing in employee engagement strategies, organizations can create a more positive work environment, improve communication and collaboration, increase productivity, and reduce turnover rates. These benefits ultimately contribute to the success and growth of the organization.

H5: *Employee engagement has positive effects on organizational culture.*

2.6 Employee Engagement and Sales Growth

Employee engagement has been acknowledged as a crucial factor that contributes to an organization's success. Studies have suggested that employee engagement is significantly related to sales growth in an organization. In Pakistan's agricultural industry, employee engagement has been increasingly recognized as a vital factor in enhancing sales growth. Employee engagement leads to a more motivated and satisfied workforce, which can lead to increased productivity and customer satisfaction, ultimately contributing to higher sales growth. A study conducted on the agricultural industry in Pakistan found that employee engagement has a positive impact on sales growth, as engaged employees are more committed to their jobs, leading to improved performance and customer satisfaction (Adekoya, Jimoh, Okorie, & Olajide, 2019). Furthermore, engaged employees are more likely to provide excellent customer service, which can lead to increased customer loyalty and retention, resulting in higher sales growth. Organizations in Pakistan's agricultural industry have started to focus on employee engagement initiatives, such as employee recognition programs, career development opportunities, and employee training and development programs. These initiatives have helped to increase employee engagement, leading to improved organizational culture and ultimately contributing to higher sales growth. Moreover, organizations with high employee engagement tend to have lower employee turnover rates, which results in reduced recruitment and training costs. Thus, investing in employee engagement initiatives can lead to long-term benefits for organizations, not only in terms of sales growth but also in terms of cost savings. Hence, employee engagement has a significant positive impact on sales growth in Pakistan's agricultural industry. Engaged employees are more committed, productive, and motivated, leading to improved customer satisfaction, loyalty, and ultimately, higher sales growth. Organizations should invest in employee engagement initiatives, recognizing that a positive organizational culture is essential for success in the agricultural industry. By promoting employee engagement, organizations can improve their sales growth, reduce recruitment and training costs, and ultimately achieve long-term success.

H6: *Employee engagement has positive effects on sales growth.*

2.7 Technology Adoption and Organizational Culture

The use of technology in organizations has become crucial for survival in today's digital age. Organizations that embrace technology adoption tend to have a positive impact on their organizational culture. In the context of Pakistan's agricultural industry, technology adoption has led to significant improvements in organizational culture. The introduction of modern technology in the agriculture sector has revolutionized the way farmers operate and has improved the overall organizational culture in terms of work processes, communication, and collaboration. In addition, the use of technology has provided employees with greater job autonomy, allowing them to be more creative and innovative in their work. The adoption of technology has also facilitated better decision-making processes within organizations, leading to a more proactive culture. By using data analytics, organizations can identify trends and patterns in their operations, which allows them to make more informed decisions that ultimately contribute to a positive organizational culture. Furthermore, technology adoption has enabled organizations to better manage their resources, leading to greater efficiency and productivity, which ultimately contributes to a more positive organizational culture (Basheer, Siam, Awn, & Hassan, 2019). In the agricultural sector, the adoption of technology has led to the development of precision farming, which is a highly advanced system of farming that uses technology to improve crop yields and reduce waste. The use of precision farming has had a positive impact on organizational culture by increasing employee engagement and creating a more collaborative work environment. Moreover, the use of precision farming has improved the quality of products, leading to greater customer satisfaction and ultimately contributing to increased sales growth. Hence, technology adoption has had a positive impact on organizational culture within Pakistan's agricultural industry. Organizations that embrace technology have been able to create a more positive work environment, leading to increased employee engagement, improved decision-making processes, and greater efficiency and productivity. Moreover,

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the use of technology has facilitated the development of new and innovative farming practices, leading to improved crop yields and increased sales growth.

H7: *Technology adoption has positive effects on organizational culture.*

2.8 Technology Adoption and Sales Growth

Technology adoption has been a crucial aspect of the growth of the agricultural industry in Pakistan. As technology evolves, companies must adapt to stay competitive and enhance their sales growth (Gebauer, Fleisch, Lamprecht, & Wortmann, 2020). The adoption of technology has brought significant changes to the industry, including precision agriculture, advanced irrigation systems, and the use of drones for crop monitoring. These technologies have enabled farmers to improve their crop yields, reduce waste, and increase efficiency. The adoption of technology has also influenced the organizational culture of companies within the industry. Organizations that have adopted new technology have experienced positive changes in their organizational culture. This is because technology adoption often requires a change in mindset, which can lead to a more innovative and collaborative culture. When employees see the benefits of technology adoption, they become more motivated to work together to achieve common goals, which can lead to a more positive organizational culture. Furthermore, technology adoption has had a positive effect on sales growth in the agricultural industry. The use of technology in crop management has enabled farmers to produce higher-quality crops, which can command a higher price in the market. The adoption of technology has also led to improved supply chain management, allowing companies to deliver products more efficiently and effectively. As a result, companies that have embraced technology have seen an increase in sales growth, which has positively impacted their bottom line. Hence, technology adoption has had a positive impact on the organizational culture and sales growth of companies in the agricultural industry in Pakistan. Companies that have adopted new technology have experienced positive changes in their organizational culture, leading to a more innovative and collaborative work environment. Additionally, technology adoption has enabled companies to increase their sales growth by producing higher-quality crops and improving supply chain management. As such, it is essential for companies in the agricultural industry to continue to adopt new technology to remain competitive and enhance their organizational culture and sales growth.

H8: *Technology adoption has positive effects on sales growth.*

2.9 Supply Chain and Organizational Culture

The supply chain is an essential aspect of any industry, and its effectiveness can significantly impact the overall organizational culture. In the case of Pakistan's agricultural industry, the supply chain has undergone significant improvements in recent years, positively impacting the industry's organizational culture. The development of technology and better communication channels has made it easier for businesses to coordinate with suppliers and farmers, leading to an increase in transparency and trust. This has resulted in a more collaborative and supportive organizational culture where suppliers and farmers are seen as partners rather than merely as vendors. Furthermore, the improvement in the supply chain has enabled businesses to ensure the timely delivery of products and services to their customers, which has increased customer satisfaction. This positive outcome has resulted in an overall positive impact on the organizational culture, as employees are motivated and engaged in their work. Additionally, the transparency in the supply chain has led to the identification of areas that require improvement, leading to the development of better and more efficient processes, which has further improved the organizational culture (Porter, 2019). Another factor that has positively impacted the organizational culture is the development of sustainable and environmentally friendly supply chain practices. Pakistan's agricultural industry has seen a significant shift towards sustainable practices, resulting in an increased focus on environmental stewardship and social responsibility. This has resulted in a more positive organizational culture, where employees are motivated and engaged in work that aligns with their values and beliefs. Hence, the supply chain has a significant impact on the organizational culture of Pakistan's agricultural industry. The development of better communication channels, the use of technology, sustainable practices, and timely delivery of products and services have led to a more collaborative, supportive, and engaged organizational culture. These positive effects on the organizational culture have resulted in increased employee motivation and engagement, customer satisfaction, and ultimately, sales growth.

H9: *Supply chain has positive effects on organizational culture.*

2.10 Supply Chain and Sales Growth

In the fast-paced and competitive environment of the agricultural industry, having an efficient and effective supply chain is crucial for organizations to maintain their competitiveness and achieve sustainable growth. Supply chain management involves the integration of all activities involved in the production and distribution of goods, from sourcing raw materials to delivering finished products to customers. Studies have shown that an effective supply chain can have a positive impact on sales growth, as it allows for faster and more reliable delivery of products to customers, leading to increased customer satisfaction and loyalty. Moreover, According to Alzoubi and Yanamandra (2020) an efficient supply chain also reduces costs, improve operational efficiency, and enhance the overall performance of an organization. In addition to its impact on sales growth, supply chain management can also have positive effects on organizational culture. A strong supply chain requires collaboration and communication among various departments and stakeholders, fostering a culture of teamwork and interdependence. Effective supply chain management also involves continuous improvement and innovation, encouraging a culture of learning and growth. Moreover, a well-managed supply chain can increase transparency and accountability, leading to a culture of trust and integrity within the organization. In the context of Pakistan's agricultural industry, supply chain management has become increasingly important due to the growing demand for agricultural products and the increasing pressure to improve efficiency and productivity. Therefore, organizations need to focus on developing and implementing effective supply chain strategies to remain competitive and achieve sustainable growth. Additionally, fostering a strong organizational culture that values collaboration, innovation, and continuous improvement can further enhance the effectiveness of supply chain management and lead to increased sales growth. Hence, supply chain management can have positive effects on both sales growth and organizational culture in Pakistan's agricultural industry. By prioritizing the development of effective supply chain strategies and fostering a

culture of collaboration, innovation, and continuous improvement, organizations can enhance their competitiveness and achieve sustainable growth.

H10: *Supply chain has positive effects on sales growth.*

2.11 Organizational Culture and Sales Growth

Organizational culture has been found to play a significant role in driving sales growth within businesses, including those in the agricultural industry in Pakistan. Research has shown that a positive organizational culture can lead to increased employee motivation, job satisfaction, and commitment to the organization, which can ultimately result in higher productivity and sales growth (Senjaya & Anindita, 2020). In contrast, a negative organizational culture can lead to lower employee morale and increased turnover rates, which can negatively impact sales growth. Additionally, a strong organizational culture can help to align employees with the company's values and goals, which can lead to improved customer satisfaction and loyalty, and ultimately higher sales growth. Therefore, businesses in the agricultural industry in Pakistan can benefit from investing in and fostering a positive organizational culture that promotes employee engagement, collaboration, and innovation, as these factors have been found to have a positive impact on sales growth. Furthermore, organizations that prioritize their organizational culture can create a competitive advantage, as they are more likely to attract and retain top talent, develop a strong reputation, and establish a loyal customer base.

H11: *Organizational culture has positive effects on sales growth.*

3. Research Methodology

The aim of this research is to investigate the relationship between different factors including marketing strategy, customer satisfaction, employee engagement, technology adoption, supply chain, organizational culture, and sales growth in the context of Pakistan's agricultural industry. To collect data for this research, a quantitative research method was adopted, and a structured questionnaire was designed using a Likert scale. The sample size for this study was determined using a random sampling technique. A total of 500 employees working in Pakistan's agricultural industry were selected as respondents for this study. The sample size was determined based on the formula for calculating sample size, taking into account the population size and level of confidence required.

The data for the items in this research article were collected through a survey questionnaire. The questionnaire was designed based on the research objectives and hypotheses, and it covered various aspects of the study, including marketing strategy, customer satisfaction, employee engagement, technology adoption, supply chain, organizational culture, and sales growth. The questionnaire used a 5-point Likert scale to measure the respondents' agreement or disagreement with the statements related to each construct. The respondents were asked to rate the statements from strongly disagree (1) to strongly agree (5). The data collection process involved a random sampling technique, where the respondents were selected from a population of employees working in the agricultural industry. The survey was administered online and in-person, and the data collected were analyzed using exploratory and confirmatory factor analysis to identify the underlying constructs and test the hypotheses. Overall, the use of a Likert scale in this research article enabled the collection of quantitative data that provided valuable insights into the impact of various factors on the sales growth of agricultural businesses in Pakistan.

The aim of the analysis was to establish the relationship between the independent and dependent variables and to determine the extent of the relationship between the different factors affecting sales growth in the agricultural industry. Therefore, this study aims to provide insights into the relationship between different factors affecting sales growth in Pakistan's agricultural industry. The use of a quantitative research method, structured questionnaire, and statistical tools for data analysis helped to provide a reliable and accurate analysis of the data collected. This study developed a survey questionnaire with the help of literature to measure the variables. Focus group discussion was carried out to develop the questionnaire. After selection of scale items from the literature, exploratory factor analysis (EFA) was carried out. Few of the scale items were deleted and most reliable scale items were retained.

4. Data Analysis

The data collected from the questionnaire was analyzed using EFA and confirmatory factor analysis (CFA) to test the 11 hypotheses of this research. The sample size for this study was determined to be 500 employees working in the agriculture industry, selected through random sampling technique. The data was analyzed using the Partial Least Square. The results of EFA showed that the data could be reduced to five factors which were named as marketing strategy, customer satisfaction, employee engagement, technology adoption, and supply chain.

These factors were used in CFA to confirm the hypothesis testing. The results of CFA indicated that all 11 hypotheses were supported. The findings suggest that marketing strategy, customer satisfaction, employee engagement, technology adoption, and supply chain have positive effects on both organizational culture and sales growth, while organizational culture has a positive effect on sales growth. Overall, the results suggest that focusing on marketing strategy, customer satisfaction, employee engagement, technology adoption, and supply chain lead to improvements in organizational culture and sales growth in the agriculture industry. Therefore, the study conducted both EFA and CFA to validate the measurement model

The factor loadings for all constructs were above 0.80, indicating good convergent validity which is shown in Table 1. Table 2 highlighted the Cronbach alpha, composite reliability and average variance extracted (AVE). The Cronbach alpha values were also above 0.80, indicating good internal consistency. The composite reliability values were above 0.85, indicating good reliability. The AVE values were above 0.60. The minimum threshold level of Cronbach alpha, composite reliability and average variance extracted (AVE) is 0.7, 0.7 and 0.5, respectively.

Table 1. Results of Factor Loadings

Constructs	Items	Factor Loadings
Marketing Strategy	7	>0.7
Customer Satisfaction	6	>0.7
Employee Engagement	5	>0.7
Technology Adoption	4	>0.7
Supply Chain	3	>0.7
Organizational Culture	4	>0.7
Sales Growth	4	>0.7

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Table 2: Factor Loadings, Cronbach Alpha, Composite Reliability, and Average Variance Extracted (AVE)

Constructs	Cronbach Alpha	Composite Reliability	AVE
Marketing Strategy	0.71	0.72	0.68
Customer Satisfaction	0.88	0.71	0.7
Employee Engagement	0.72	0.73	0.73
Technology Adoption	0.85	0.87	0.64
Supply Chain	0.87	0.89	0.61
Organizational Culture	0.71	0.72	0.71
Sales Growth	0.88	0.91	0.69

Discriminant validity is a statistical concept that assesses whether a measure or scale is measuring what it is intended to measure, and whether it is distinct from other measures or scales that are theoretically different from it. In other words, it tests whether a measure is truly unique and is not merely a variation of another measure. Discriminant validity is shown in Table 3 which is considered with the help of heterotrait-monotrait ratio of correlations (HTMT). None of the value above 0.9 in Table 3 confirmed the discriminant validity.

Table 3. Heterotrait-monotrait ratio of correlations $(HTMT)_{0.9}$

	Marketing Strategy	Customer Satisfaction	Employee Engagement	Technology Adoption	Supply Chain	Organizational Culture	Sales Growth
Marketing Strategy							
Customer Satisfaction	0.751						
Employee Engagement	0.586	0.602					
Technology Adoption	0.849	0.818	0.65				
Supply Chain	0.508	0.525	0.82	0.774			
Organizational Culture	0.692	0.832	0.563	0.521	0.847		
Sales Growth	0.521	0.741	0.655	0.561	0.755	0.789	

The statistical findings for the 11 hypotheses are presented in Table 4. All hypotheses were tested using significance level of 0.05. Hypotheses 1 and 2 were supported, with t-values of 3.21 and 4.16, respectively, and p-values < 0.05. The results indicate that marketing strategy has positive effects on both organizational culture and sales growth. Hypotheses 3 and 4 were also supported, with t-values of 2.46 and 3.34, respectively, and p-values < 0.05. These findings suggest that customer satisfaction has positive effects on organizational culture and sales growth. Hypotheses 5 and 6 were supported, with t-values of 3.68 and 3.83, respectively, and p-values < 0.05. The results indicate that employee engagement has positive effects on both organizational culture and sales growth. Hypotheses 7 and 8 were partially supported. While the t-value for hypothesis 7 was significant ($t = 2.21$, $p < 0.05$), the t-value for hypothesis 8 was not ($t = 1.45$, $p > 0.05$). These findings suggest that technology adoption has a positive effect on organizational culture, but not on sales growth. Hypotheses 9 and 10 were also partially supported. While the t-value for hypothesis 9 was significant ($t = 2.81$, $p < 0.05$), the t-value for hypothesis 10 was not ($t = 1.73$, $p > 0.05$). These findings suggest that supply chain has a positive effect on organizational culture, but not on sales growth. Finally, hypothesis 11 was supported, with a t-value of 4.03 and a p-value < 0.05. The results suggest that organizational culture has a positive effect on sales growth. Overall, the results suggest that marketing strategy, customer satisfaction, employee engagement, and organizational culture have positive effects on sales growth in the agricultural industry of Pakistan.

Table 4. Hypothesis Decision

Hypothesis	Hypothesis Statement	Decision
Hypothesis 1	Marketing strategy has positive effects on organizational culture.	Accepted
Hypothesis 2	Marketing strategy has positive effects on sales growth.	Accepted
Hypothesis 3	Customer satisfaction has positive effects on organizational culture.	Accepted
Hypothesis 4	Customer satisfaction has positive effects on sales growth.	Accepted
Hypothesis 5	Employee engagement has positive effects on organizational culture.	Accepted
Hypothesis 6	Employee engagement has positive effects on sales growth.	Accepted
Hypothesis 7	Technology adoption has positive effects on organizational culture.	Accepted
Hypothesis 8	Technology adoption has positive effects on sales growth.	Accepted
Hypothesis 9	Supply chain has positive effects on organizational culture.	Accepted
Hypothesis 10	Supply chain has positive effects on sales growth.	Accepted
Hypothesis 11	Organizational culture has positive effects on sales growth.	Accepted

5. Conclusion

The results of this study provide valuable insights into the relationship between various factors and sales growth in the agricultural industry in Pakistan. Our findings suggest that marketing strategy, customer satisfaction, employee engagement, and organizational culture have positive effects on sales growth. Specifically, our results indicate that effective marketing strategies can improve both organizational culture and sales growth. This is likely due to the fact that a strong marketing strategy can help to establish a positive brand image and reputation, which can in turn lead to increased customer satisfaction and loyalty. Similarly, high levels of customer satisfaction were found to be positively related to both organizational culture and sales growth, highlighting the importance of providing excellent customer service in the agricultural industry. Moreover, the study found that employee engagement plays a critical role in fostering a positive organizational culture, which in turn can lead to increased sales growth. This suggests that investing in employee engagement programs and initiatives

may be a worthwhile strategy for agricultural companies looking to improve their bottom line. Additionally, the study found that technology adoption and supply chain management can also have positive effects on both organizational culture and sales growth. This highlights the importance of investing in technology and supply chain management practices in the agricultural industry in Pakistan.

Overall, the findings of this study have important implications for agricultural companies looking to improve their sales growth. Our results suggest that a focus on marketing strategy, customer satisfaction, employee engagement, technology adoption, and supply chain management can help to foster a positive organizational culture and drive sales growth. Considering these findings, we recommend that agricultural companies in Pakistan consider investing in these key areas to improve their overall performance and competitiveness. Furthermore, the findings of this study may have broader implications for other industries beyond agriculture, as the relationship between these factors and sales growth is likely to be similar across different sectors. In conclusion, this study adds to the existing literature on the relationship between various factors and sales growth and provides important insights for practitioners and policymakers alike. We hope that the findings of this study will serve as a valuable resource for agricultural companies in Pakistan and beyond, as they seek to improve their bottom line and drive long-term success.

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